MILL CREEK

Flood Management Plan

Meeting Summary
November 9, 2000
November 28, 2000
December 18-19, 2000

Mill Creek

Prepared for:

U.S. Army Corps of Engineers

Prepared by:

Moore Iacofano Goltsman, Inc.
800 Hearst Avenue
Berkeley, California 94710
510.845.7549
www.migcom.com

PARTICIPANTS

Lora Alberto, Mill Creek Restoration Project (MCRP)

Glen Beckham, Corps of Engineers, Louisville District

Collin Browning

Dave Busking, City of Forest Park

David M. Canteen

Jim Coppock, City of Cincinnati – DOTE

Robin Corathers, MCRP

Bob Cordes, Millcreek Valley Conservancy District (MVCD)

Charles Crusham, Corps of Engineers, Louisville District

Stephen Dana, League of Women Voters of Ohio

John Dowlin, Hamilton County Commission

Dan Dudley, Ohio EPA, Surface Water

Nancy Ellwood, Mill Creek Watershed Council

Linda Fitzgerald, Village of Evendale

Kevin S. Flowers, County Water and Sewer District/ Izaak Walton League

Mike Fremont, Rivers Unlimited

David Gamstetter, Cincinnati Park Board

Jamie Coleman

Philip Gray, XLG Consultants

Al Grogan, Continental Mineral

Catherine Hartman, Village of Evendale

Stan Hedeen, Xavier University

Randy Hoover, ODNR-Wildlife

John Hunter, League of Women Voters, MCRP, MCWC

Bob Jansen, MVCD

Steve Johns, Hamilton County Regional Planning Commission (HCRPC)

Jeff Klekner, Corps of Engineers, Louisville District

Bruce Koehler, OKI Regional Council of Governments

Eugene Langschwager, Greater Cincinnati Chamber of Commerce

Mary Lynn Lodor, Butler County Department of Environmental Services (BCDES)

Doug Lohmeier, Village of Evendale

Virgil Lovitt, City of Sharonville

Steve Malone, Ohio EPA-DEFA

Melanie McNulty, Springfield Township

Jonny McSwain, property owner

Ron McSwain, McSwain Carpets

Doug Meadors, Corps of Engineers, Louisville District

Michael C. Miller, University of Cincinnati, Biology

Ron Miller, HCRPC

Chris Moran

Linda Murphy, Corps of Engineers, Louisville District

Dennis Murphey, City of Cincinnati

Mari Piekutowski, Ohio EPA

Christine Pope, City of Sharonville

Richard Pruitt, Corps of Engineers, Louisville District

Steve Rasfeld, Village of Amberley

Jerald Robertson, Elmwood Place

Robert Rudd, Corps of Engineers, Louisville District

Melanie E. Schmitt, University of Cincinnati

Barry Schueler, Corps of Engineers

Susan Schultz, MCRP

Len Stahl, Contech Construction Production

Marty Umberg, Metropolitan Sewer District of Greater Cincinnati (MSD)

Nancy Ward, MSD

Alan Weinel, Anchor Bros., Woodlawn Greenway

Tim Winchell, Corps of Engineers, Great Lake and Ohio River Division

Chris Wright, Corps of Engineers, Louisville District

Jim Wuenker, MVCD

Chris Wunnenberg, Schumacher Dugon

Tom Yingling, Corps of Engineers, Louisville District

Tim Zelek, Hamilton Company Park District

CONTENTS

EXECUTIVE SUMMARY

The Mill Creek, a 28-mile long stream in southwestern Ohio, drains into the Ohio River in the City of Cincinnati. Much of the creek's length is through highly developed areas. Historically, Mill Creek has experienced significant flooding, both from backwaters of the Ohio River, and from the Creek's own high waters.

Over the past century, many flood protection projects, both public and private, have been undertaken along Mill Creek to protect property along its banks. The construction of dams and channelization of the creek have provided additional flood protection but have also permanently affected riparian habitat as well as the aesthetic and recreational value of the creek through this urban area.

The U.S. Army Corps of Engineers is currently conducting a General Reevaluation Study of a previous project authorized for Mill Creek in 1970. That project consisted of channel improvements and was suspended in 1992, at the direction of the Assistant Secretary of the Army for Civil Works, with four of the ten project sections completed and two others partially completed.

The General Reevaluation Study started in August 1998 and was to conclude with a General Reevaluation Report in October 2000. With the identification of increases in time and costs required to complete the General Reevaluation Study, the Corps of Engineers realized that the plans being considered did not have full community support and there may not be a consensus regarding what stakeholders want for Mill Creek. Prior to proceeding with the General Reevaluation Study, the Corps of Engineers decided to seek more input from the community.

The Corps of Engineers retained the firm of Moore Iacofano Goltsman, Inc. (MIG) to conduct three "visioning" workshops with the key stakeholders and elected officials in the Mill Creek region to determine the direction for the development of a Mill Creek Flood Management Plan. These workshops, held on November 28, December 18 and 19, 2000, along with the "Mill Creek Vision" Open House conducted by the Mill Creek Watershed Council on November 9, are the basis of this report.

These meetings resulted in an initial consensus regarding the elements of a Mill Creek Flood Management Plan involving multiple objectives, and

"… (the Mill Creek Flood Management Plan) will outline a new flood protection strategy that restores natural systems, enhances water quality and creates an urban amenity."

short and long-term goals for the project. The meetings also provided the necessary input for the Corps of Engineers project team to prepare a report to Corps of Engineers leadership and Congress to obtain Federal appropriations for continued planning and completion of the General Reevaluation Study.

Mill Creek Flood Management Plan

A coalition of community interests led by the Mill Creek Watershed Council, with support from the Corps of Engineers, Metropolitan Sewer District (MSD), Millcreek Valley Conservancy District (MVCD), Mill Creek Restoration Project (MCRP), and local communities, should move forward to spearhead the development of the Mill Creek Flood Management Plan. This plan will outline a new flood protection strategy that restores natural systems, enhances water quality and creates an urban amenity. The plan will be prepared through a community-wide planning process ensuring that all stakeholders are represented.

The consensus Action Plan for development of this Flood Management Plan emerged from the four days of community meetings. The rationale and process for formulating this Action Plan are outlined in more detail in the following sections. In summary, the key elements include:

- Study the deep tunnel alternative as a potential foundation for a community-based flood management alternative
- Initiate financing studies and cost-benefit analyses
- Develop a funding strategy
- Begin a public outreach process to build support for the plan, including zoning workshops, floodplain management seminars, dialogue with property owners, and other community education and marketing efforts
- Finalize plan and certify EIS
- Finalize funding strategy and seek state/federal funding
- Develop ongoing operations and maintenance plan/agreement
- Begin construction

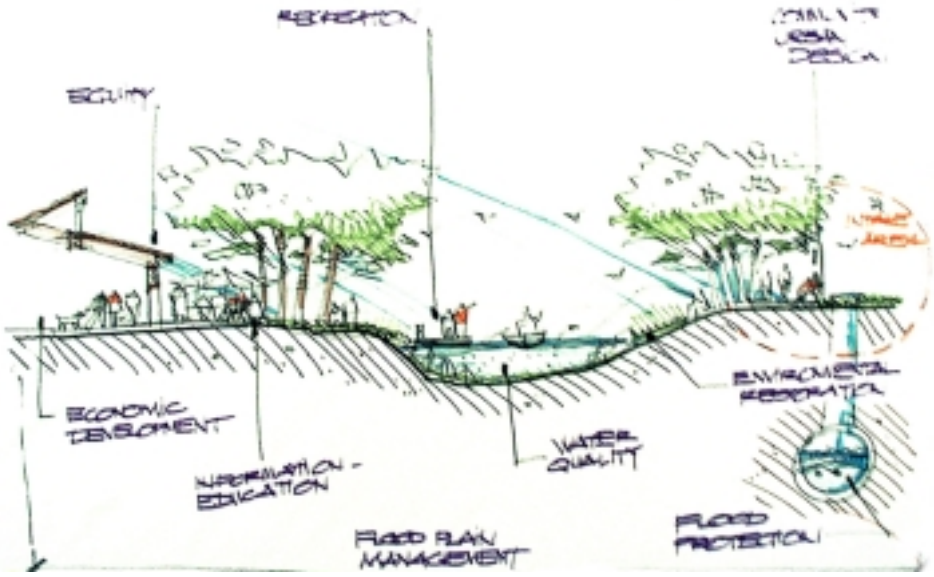
In addition, meeting participants identified a number of **short-term actions** to be implemented immediately. It was acknowledged that the process of floodplain management is non-linear, requiring multiple tasks to be tackled at once. Some immediate progress is necessary to give the

process momentum and to effectively utilize existing funds authorized under existing programs:

- Funding and completion of the GRR for the Mill Creek Flood Damage Reduction Project
- Install early flood warning system
- Implement log jam watch program
- Move forward on a select number of environmental restoration projects
- Improve local storm runoff controls and on-site retention
- Create new floodplain storage areas (e.g., wetlands and detention areas)
- Implement Butler County Conceptual Plan for the Upper Mill Creek Flood Mitigation and Riverine Restoration Project
- Increase surveillance of cleanup and filling activities
- Purchase available existing sites/easements
- Implement selected greenway and recreation elements contained in the Greenway Master Plan

About this Report

This document summarizes the discussion and written comments submitted by participants from the four workshops. During the meetings, comments were recorded in real time on a wall-sized map of the Mill Creek watershed, and on additional wall-sized sheets of paper. Photo-reductions of these wallgraphics are included in the Appendix.



OVERVIEW OF MEETINGS

"Mill Creek Vision" Open House (November 9, 2000)

The Mill Creek Watershed Council conducted an Open House to solicit community input for the Mill Creek Flood Management visioning process. The Metropolitan Sewer District of Greater Cincinnati (MSD) recorded comments from the open house participants in a 20-minute video. The participants identified multi-objectives for the Mill Creek plan, including flood protection, parkway development, environmental restoration and recreation. The Open House and video provided the foundation for the visioning meetings.

Initial Scoping Meeting (November 28, 2000)

On November 28, 2000 MIG facilitated two meetings at the MSD offices in Cincinnati. MIG first met with the Project Sponsors including the Corps of Engineers, officers and staff of the Mill Creek Watershed Council, and the Millcreek Valley Conservancy District to understand the background, needs and issues of the Mill Creek Project. Dave Dickson, former Project Manager for the Napa, California Flood Management Plan, presented the Napa experience and process for reaching community consensus on a plan and financing structure involving a Corps of Engineers sponsored flood protection component, environmental restoration, recreation, and economic development as well as a sales tax increase to pay the local share.

In the afternoon, members of the Mill Creek Watershed Council and other local stakeholders were invited to participate in a discussion of the Mill Creek Project and to gain their input in structuring the visioning workshop on December 18-19. This meeting was well attended by over 40 participants. The Open House videotape framed the Mill Creek issues and led to the beginning of the visioning process.

Visioning Workshop (December 18-19, 2000)

Community members and key Mill Creek area agencies were invited to a meeting on December 18, 2000 to discuss the overall vision for the future of Mill Creek and discuss issues affecting flood protection and environmental restoration options for Mill Creek. Approximately 60 people attended this meeting, held at the Sharonville Convention Center in Sharonville, Ohio.

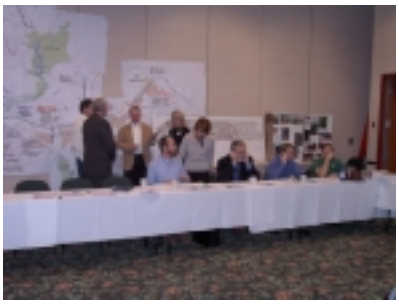
A second meeting was held the following day on December 19, 2000 with local elected officials and key representatives of agencies and organizations. The purpose of the second meeting was to review the outcomes of the previous day and the Mill Creek Vision Open House, to gain consensus from community leaders on an acceptable approach to flood damage reduction, and to develop a strategy for carrying the project forward. Approximately 40 people attended this meeting.

Day 1: Community Member Workshop

Linda Murphy, project manager of the Mill Creek Flood Damage Reduction Project with the Corps of Engineers, opened the meeting with brief introductory remarks. Jeffrey Klekner of the Corps of Engineers, Chief of the Civil Project Management Branch, reiterated the significance of the upcoming process.

Vision, Opportunities and Goals

The first presentations of the day provided an overview of the existing planning context. The group watched a video from the Mill Creek Vision Open House held in Evendale on November 9, 2000 as a lead-in to a discussion on flood management and the health of the Mill Creek watershed. Dennis Murphey and Nancy Ellwood of the Mill Creek Watershed Council, Robin Corathers of the Mill Creek Restoration Project, and Marty Umberg of the Metropolitan Sewer District of



Greater Cincinnati gave additional comments on their visions for the future of Mill Creek.

Daniel Iacofano of MIG then facilitated a discussion with the full group on their vision for the Mill Creek and flood protection opportunities and goals.

Flood Protection Challenges

To open the discussion on issues and challenges regarding flood protection on Mill Creek, Dave Dickson of MIG gave a brief presentation on innovative flood management projects and planning processes in other areas.

Next, Linda Murphy and Louisville District Staff gave a presentation on flood protection options that have been under study for Mill Creek, including levees and floodwalls, detention basins, non-structural alternatives, floodplain management, and underground solutions. Following the presentations, Daniel Iacofano led a group discussion on the options, and how they support the community vision for Mill Creek.

The results of these discussions were recorded on large wall maps of the Mill Creek watershed to ensure that all issues and current projects affecting the planning process were identified. The results of the first day's meetings were used to brief the local community leaders and local elected officials who convened the next day to discuss the approach for moving forward with the General Reevaluation Study.

Day 2: Elected Officials, Community Leaders and Corps of Engineers Workshop

The second day of the Visioning Workshop concentrated on orienting the local leaders and Corps of Engineers Ohio River Division staff to the issues identified by the community, and to gain consensus on a strategic direction for the Mill Creek Flood Management Plan.

Daniel Iacofano walked the local leaders and Corps Divisional staff through the issues and strategic directions recommended in Day 1, which were recorded on the wallgraphics. Corps and Watershed Council staff clarified the issues and recommended directions.

Daniel Iacofano then facilitated a discussion with local leaders regarding the issues and directions outlined in the next section of this report. At the end of the meeting there was a hand vote of those present regarding the recommended Action Plan. With the exception of one member of Rivers Unlimited, there was unanimous agreement for the Action Plan and approach outlined in this summary report.

"Clearly, the new standard for flood management is a comprehensive "living river" approach relying on a combination of structural and nonstructural elements."

VISION, OPPORTUNITIES AND GOALS

Meeting participants agreed on a set of nine general goals that should be addressed through the upcoming planning process. Together, these goals form an overall vision for the Mill Creek Valley. Clearly, the new standard for flood management is a comprehensive "living river" approach relying on a combination of structural and nonstructural elements. Environmental restoration, recreation and creation of sense of place are integral to the process.

■ Flood Protection and Storm Water Management

Improvements must provide the needed flood protection for properties in the Mill Creek drainage basin. Improvements to existing storm water management practices and redesign of existing dikes and walls may be required. Solutions must provide 100-year flood protection.

■ Environmental Restoration

Unaltered stream systems have enormous capacity to absorb floods, and high water cycles feed valuable nutrients to riparian areas. Natural habitat and ecosystems should be restored as a component of flood management, to provide water retention capacity as well as valuable habitat. A reforestation and re-vegetation management program may be integrated into this effort. Efforts should also be made to restore altered and channelized stream segments.

■ Water Quality Restoration

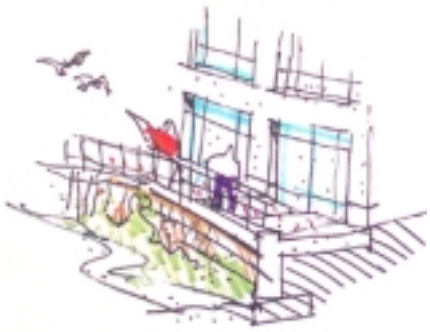
Flood management systems should further current efforts to improve water quality of the Mill Creek. In particular, the problem of combined sewer overflows must be addressed. The Ohio Environmental Protection Agency is working to ensure that Mill Creek meets water quality standards and criteria.

■ Floodplain Management

Flooding issues must be approached from an overall floodplain management perspective. In addition to solutions targeted on Mill Creek itself, the management plan should address development throughout the watershed, including issues such as stream setbacks, impervious surfaces and habitat protection.

■ Economic Development

Improvements along Mill Creek should provide opportunities for business development. The Creek is an urban amenity that can enhance the desirability of the area for new businesses, as well as help to retain existing businesses. San Antonio's Riverwalk was cited as a successful example of leveraging waterfront amenities to encourage economic development. Additionally, existing brownfield sites should be remediated to provide opportunities for commercial, industrial and residential development.



■ Urban Design

Flood control structures should be designed to complement the urban environment and provide public access to natural resources. Mill Creek is a natural greenway that should be showcased as an amenity.

■ Recreation

The Mill Creek corridor offers an excellent opportunity to provide an extensive greenway and trails through the community, connecting existing open spaces and parks. The Mill Creek Watershed Council's recently adopted Greenway Master Plan provides a good foundation.

■ Equity

All people of the region should have adequate flood protection and access to recreation opportunities along Mill Creek.

■ Education

The flood management plan must be developed though a community-based process with real decision-making at the local level. Programs should be implemented to enhance public awareness of flood issues (e.g., school programs, early warning system, outreach on the value of stormwater detention areas and wetlands, and outreach on programs to buy out flood-prone properties).

"The flood management plan must be developed through a community-based process with real decision-making at the local level."

"Floodplain management in the Mill Creek Valley must balance the needs of industry with the need for flood protection and environmental restoration."

ISSUES AND NEEDS

In order to achieve the goals for floodplain management and environmental restoration along the Mill Creek corridor, the following issues need to be addressed:

■ Flood Management

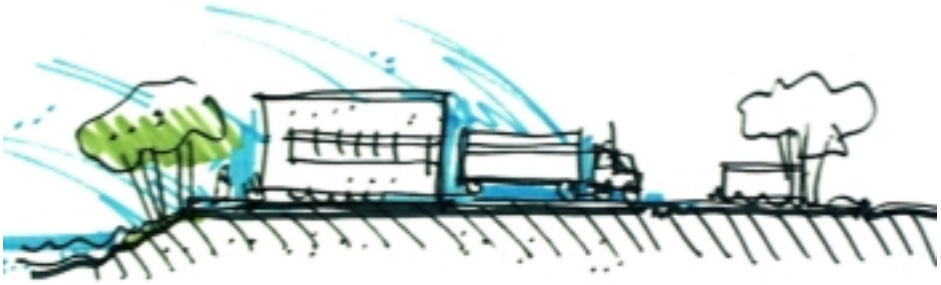
With its history of flooding problems and high level of development in flood-prone areas, the need for flood control along Mill Creek is great. Participants felt that new, innovative approaches should be applied in addressing these problems.

■ Industrial Valley

Historically, the Mill Creek Valley has been home to a strong industrial base, providing quality jobs for residents and a healthy tax base. Industry has also left Mill Creek with water quality problems, contaminated lands, and industrial properties in floodplain areas. Floodplain management in the Mill Creek Valley must balance the needs of industry with the need for flood protection and environmental restoration. The area cannot risk losing jobs to other regions and must provide for future industry growth and expansion in this traditionally industrial local economy. At the same time, the remediation of contaminated "brownfields" provides an opportunity for redevelopment and/or restoration.

■ Project Costs

Participants acknowledged that the cost of comprehensive flood management approaches would be high. However, they also agreed that alternatives should be evaluated not only for their immediate costs, but for their "life cycle" costs and for their external benefits as well. The flood management plan should be multi-objective in its scope.



■ Extent of Ecological Damage

Previous flood control efforts, such as dams and channelization, have severely altered natural habitat. Pollution is also an issue – the combined sewer overflow (CSO) problem needs to be addressed, water quality must be improved, and there are five Superfund sites as well as numerous brownfields in the Mill Creek watershed.

■ Development in the Floodplain and Watershed

Many properties are already located in flood prone areas, posing a substantial risk in the area. Property rights of existing owners must be protected. Additionally, high levels of development throughout the watershed increase stormwater runoff and contribute to the flooding problem. There is a need to seek opportunities to reduce impervious surfaces *throughout the watershed* and particularly near Mill Creek itself.

■ Multi-Jurisdictional Process

Mill Creek and its adjoining properties are under the jurisdiction of multiple agencies and municipalities. The Creek runs through Butler County and Hamilton County, as well as 35 other political jurisdictions, including the local jurisdictions of Cincinnati, Evendale, and Sharonville. State and federal agencies are also involved, including the Corps of Engineers. At the state level, the Ohio Environmental Protection Agency and Ohio Department of Natural Resources oversee water quality and habitat issues. At the local level, the Millcreek Valley Conservancy District is the sponsor of the existing Corps of Engineers Flood Damage Reduction Project in the main stem of the Mill Creek in Hamilton County. Additionally, special districts (e.g., school districts, soil and water conservation districts) and community organizations such as the Mill Creek Watershed Council are affected by this planning effort, and are active in community improvement efforts along Mill Creek.

■ Other Site-Specific Issues

Participants also identified some site-specific issues along Mill Creek, including the following (see appendix for wallgraphic):

- Railroads create barriers to creek access in Lick Run area
- The dump north of Carthage Park creates impacts on the Creek, but also presents a restoration opportunity
- Silt and erosion problems occur at Winton Lake and other locations throughout the watershed

OPTIONS

Community workshop participants reviewed three general options for providing additional flood damage reduction on Mill Creek.

- **The first** focuses on **structural solutions**, such as retention basins, levees and floodwalls, providing aboveground containment
- The **second approach** relies on **non-structural floodplain** management techniques, such as relocation of properties from flood-prone areas
- The **third option** involves **construction of a large-diameter, deep tunnel that would handle excess flow during flood events** as well as addressing existing combined sewer overflow (CSO) problems

Participants generally felt that aboveground structural solutions are not desirable because they degrade the environmental quality of Mill Creek, cut people off from an important natural resource, and foreclose on options for future Creek restoration and parkway development as identified in the *Mill Creek Greenway Master Plan.* Non-structural approaches such as relocation can be effective, but are also difficult to implement at a large scale due to the high cost of acquisition, loss of jobs, and property rights issues.

The underground solution was seen as the best long-term approach for flood damage reduction while allowing for future flexibility, such as environmental restoration, economic development, and recreational activities in the Mill Creek Valley.

"Participants generally felt that above-ground structural solutions are not desirable because they degrade the environmental quality of Mill Creek."

MILL CREEK PLANNING & ACTION PLAN

Approach

Meeting participants worked to outline a planning and action process for flood management in the Mill Creek Valley. Overall, participants agreed that the planning process should be community-based.

The process should be based on a "Community Coalition" comprised of political jurisdictions, Hamilton County, Butler County, local businesses, and special interest groups. The Community Coalition would be led by a Steering Committee, responsible for directing the overall process. A technical team supporting the planning process must include expertise in engineering, environmental science, architecture, landscape architecture, and environmental planning.

Timeline

The Mill Creek Flood Management Plan would be developed under the general timeline outlined below:

2001

- Obtain federal funding to continue the GRR
- Complete Community Coalition Concept Plan, including alternatives to be analyzed under the Environmental Impact Statement (EIS) and the Corps of Engineers General Reevaluation Report (GRR) process
- Study the deep tunnel alternative as a potential foundation for a community-based flood management alternative
- Initiate financing studies and cost-benefit analysis
- Develop a funding strategy
- Begin public outreach process to build support for the Concept Plan, including zoning workshops, floodplain management seminars, dialogue with property owners, and other community education and marketing efforts

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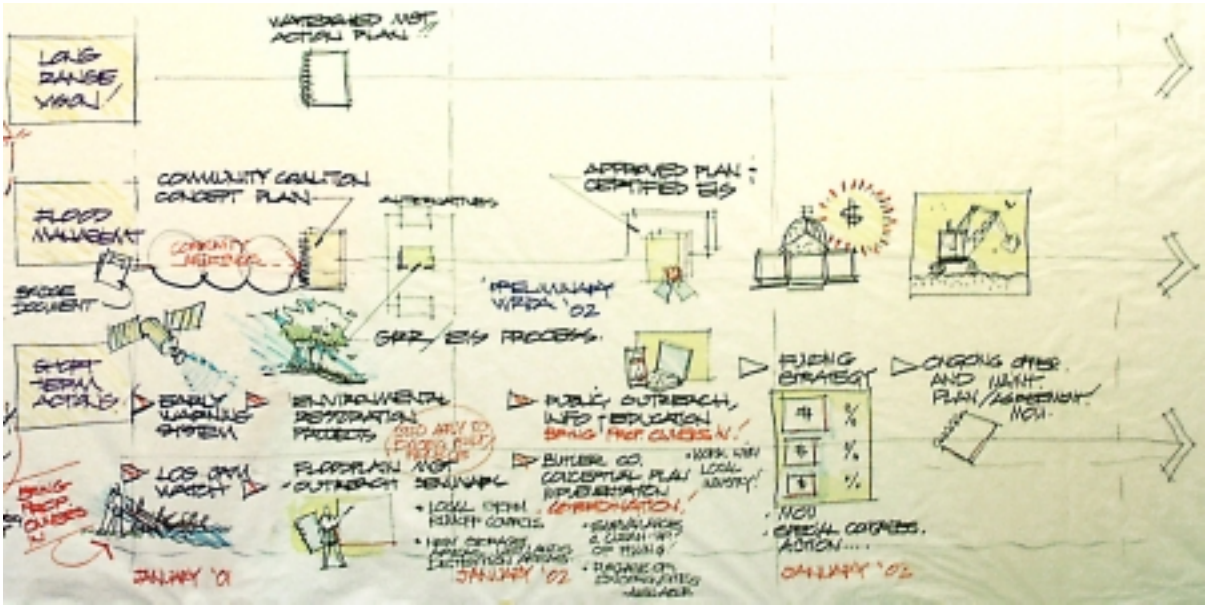
- Petition Congress to mandate completion and funding of the GRR under the current authorization and agreement
- Continue public outreach process
- Finalize plan and certify EIS
- Finalize funding strategy and seek state/federal funding

- Develop ongoing operations and maintenance plan/agreement
- Begin construction

Short Term Actions

In addition, meeting participants identified a number of **short-term actions** to be implemented immediately: It was acknowledged that the process of floodplain management is non-linear, requiring multiple tasks to be tackled at once. Some immediate progress is necessary to give the process momentum and to effectively utilize existing funds.

- Obtain funding and install early flood warning system
- Implement log jam watch program
- Move forward on a select number of environmental restoration projects through either existing Corps of Engineers authorities or local programs
- Improve local storm runoff controls and on-site retention
- Create new floodplain storage areas (e.g., wetlands and detention areas)
- Implement Butler County Conceptual Plan for the Upper Mill Creek Flood Mitigation and Riverine Restoration Project
- Increase surveillance of cleanup and filling activities
- Purchase available existing sites/easements
- Implement selected greenway and recreation elements



FUNDING PROGRAM

The success of this flood management plan will hinge on the ability to secure funding for its implementation. Meeting participants identified potential funding sources for implementing a comprehensive flood management plan and environmental restoration project:

- Utilize existing Corps funding program (may require reauthorization)
- Pursue Congressional support and additional appropriations
- Explore possible regional tax sharing program
- Utilize brownfield monies and state mitigation funds
- Investigate potential state bonus for multi-jurisdictional watershed planning
- Coordinate with other existing programs for related projects (e.g., Greenways Master Plan, brownfields remediation programs) to leverage resources
- Pursue public/private partnerships and cooperation with major flood-affected businesses in the area

NEXT STEPS

The Corps of Engineers will utilize the results of the meetings summarized in this document to complete a Bridging Document. This document will be distributed to local stakeholders and submitted to the Corps of Engineers higher Headquarters for approval to continue the General Reevaluation Study. The Watershed Council will coordinate with the Corps of Engineers on this process.

Meeting Review

Participants were asked to comment briefly on the effectiveness of this meeting, so that future meetings can benefit from the process. The following comments are representative of the sentiment expressed by various meeting participants:

- Ensure that key players (congressional representatives, businesses, landowners) are invited to future meetings
- The meeting format was effective as an educational as well as participatory process
- Moderators and speakers were excellent and fair in eliciting broad-based input and consideration of a variety of ideas and solutions
- In the future, it will become necessary to have more concrete working sessions in order to deal with the complexity of the issues and important details
- Ensure that these meetings lead to actions!